ORAL HYPOSENSITIZATION BY OLEORESIN EXTRACTS

B. BRACHMAN, M.D. and A. K. ROY, M.D.,
Regina, Sask.

IN THE PAST FEW YEARS evidence has been presented that contact dermatitis to plant oil oleoresins may be successfully treated by oral hyposensitization using the causative plant oleoresins. Fisher[1] reports on 18 cases of ragweed dermatitis of long duration treated by the oral hyposensitization method. Four patients followed up for five years noted clinical improvement, which was accompanied by reduction in reaction to the patch tests. Fourteen cases followed up for a shorter period of time seemed to be following a similar pattern. Slater *et al.*[2] believe that the treatment of choice of ragweed dermatitis is by the oral method, using ragweed oleoresin in corn oil. Brunsting[3] reports unsuccessful attempts at desensitization by injection of specific oils. Thomson and Thomson[4] review literature on immunization by the oral route. They believe that relief could be obtained in a fair proportion of cases of poison ivy sensitivity by giving the specific oleoresin by mouth. They also believe that the specific oleoresin is better given by mouth than by the parenteral route.

METHOD

In 1951 because of the unsatisfactory results obtained in plant contact dermatitis by injection of the protein fraction, we decided to undertake the treatment of a number of these cases by oral administration of specific oleoresin extracts. As a result we now have over 50 cases under treatment. The present report will deal with 19 of these patients who responded to a questionnaire mailed out to 28 who had been under treatment for a year or more.

Oleoresin patch tests were carried out on 17 of the 19. Routine protein scratch tests to the more common local weeds, grasses, trees and flowers were performed on 18 of the 19 cases. The testing material* used in this series consisted of oleoresin diluted in ten parts of acetone. The open method of patch testing was employed, material being applied to an area selected on the back and allowed to dry on. The patient was advised not to wash the area until readings were made 48 hours later. In all cases, to avoid possible flare-ups, testing was performed when the eruption was in a quiescent stage or entirely clear.

All patients, whether they showed reactions to the oleoresin fraction or the protein fraction of the plant, were given the oleoresin treatment set. The treatment set consists of three bottles of the specific oleoresin diluted in corn oil, together with a number of No. 1 size gelatin capsules. The set contains 1 oz. each of the 1:100, 1:50, and 1:25 dilutions.

The patient is instructed to take an initial dose of one drop of the 1:100 dilution of the oleoresin in a gelatin capsule. The capsules are filled at the time of ingestion, and fewer reactions are noted if the capsule is taken immediately following the morning or evening meal. This dosage is taken daily for a week. During the second week two drops are ingested daily. After this period, if there are no symptoms of intolerance, the patient is advised to increase the number of daily drops as rapidly as tolerated. After the bottle of 1:100 dilution has been taken, the patient is advised to begin the 1:50 dilution, starting with half or less of the maximum number of drops he was ingesting at the time when the first bottle was finished and increasing as before. The same applies to the 1:25 concentration. Tolerance to the material varies to a considerable degree, some patients being able to stand rapid increases, using up the three bottles in as short a period as two months. With the prescribed gradual increase the initial set is intended to last eight months.

Treatment complications when they occur usually manifest themselves during the first few weeks of therapy. These consist of pruritus ani, which is the most annoying, acute exacerbations of the existing skin condition and less often urticarial eruptions. If such complications should occur, the patient is advised to stop treatment and resume the same or slightly reduced dosage of daily drops when the symptoms have disappeared. Complete avoidance of the plant suspected is stressed during this period of treatment.

RESULTS OF TREATMENT

The information obtained in this series of cases and shown in Table I is the result of a detailed and lengthy questionnaire. It must be stressed that this information has been supplied by the patient and, hence, must be considered as subjective only. It was found necessary to divide the improvement column into two, for in some cases it was not possible to deduce from the patients' answers whether there had been a definite improvement. These cases were placed in a "questionable" column. Under the heading

*The material used in testing and treatment was obtained from the Graham Laboratories, 7 Willow Lane, Dallas 6, Texas.

of "definitely improved" we considered only those who stated that during the next pollen season there was either no recurrence of the eruption or that the recurrence, if there was one, was much milder in character. Those patients who considered themselves unimproved were unequivocal in their replies.

It is our plan to conduct yearly surveys of our treated patients and to perform follow-up examinations and patch tests on those patients who have completed three years of continuous oral therapy, to assess the degree of clinical improvement. Of the nine who completed at least one full year of treatment, six have reported definite improvement. Patients who reacted to the scratch method only were generally unimproved, with the exception of one (11) who gave reactions to both types of testing, and another (2) who reacted to scratch tests only. In the former, while it would appear that the patient was protein sensitive, it may be argued that he was also oleoresin sensitive. Of the 19 cases, 14 showed reactions to the oleoresin patch tests. Eight of these showed no reactions to the scratch method. In the remainder, the reactions to the oleoresin patch tests were decidedly stronger and more numerous. In only one case, showing reactions to both methods, did the number of scratch reactions outnumber the patch reactions (Case 11). Of the 14 patients, five discontinued treatment because of flare-ups of their eruptions. Of the unimproved, three had reacted to protein scratch tests and only two to oleoresin patch tests.

Side reactions in this group were very much in keeping with those reported by other authors. These consisted of pruritus ani, flare-ups of the eruption, and gastro-intestinal upsets. It is unfortunate that five of the patients chose to discontinue treatment instead of following the instructions to discontinue taking capsules temporarily and resume on slightly reduced daily doses when symptoms had subsided.

SUMMARY

1. Nineteen cases of plant dermatitis have been treated for a period of one to two years by the use of plant oleoresin extracts. Fourteen patients continued treatment for a period of one to two years. Nine of these were oleoresin sensitive and five were protein sensitive. Of the nine oleoresin sensitive, six reported definite improvement. Of the five protein sensitive, two reported im-

TABLE I.

THE TREATMENT OF POLLEN DERMATITIS WITH OLEORESIN (ORALLY)

No.	Oleoresin patch tests	Protein scratch tests	Number of positive reactions		Duration of disease in years	Duration of treatment in years	Side reactions			Improvement			
			Scratch	Patch	At time of testing		Pruritus ani	Flare-up	G.I.	Unimproved	Questionable	Definite	
1.	x	x	1	3	2	2	x					x	
2.		x	4	0	2	2	x					x	
3.	x	x	2	0	6	1				x			
4.	x	x	0	8	2	1		x				x	
5.	x	x	0	11	2	2	x	x	x		x		
6.	x	x	0	3	8	2		x				x	
7.	x	x	6	0	3	1					x		
8.	x	x	1	5	2	1				x			Took only half initial supply.
9.	x	x	0	13	8	2	x					x	
10.	x	x	2	4	3	Stopped o	leoresin b	ecause	of flar	e-up of e	ruption (on	e month)	
11.	x	x	7	2	9	1						x	
12.	x		0	6	24	1		x			x		
13.	x	x	5	0	3	1		x	x	x			
14.	x	x	3	9	7	2						x	
15.		x	34	0	5	1				x			
16.	x	x	4	6	1	Stopped o	leoresin b	ecause	of flare	-up (two	weeks).		
17.	x	x	0	4	1	Stopped o	leoresin b	ecause	of flare	-up (thre	e months).		
18.	x	x	0	8	2	Stopped o	leoresin b	ecause	of flare	-up (thre	e months).		
19.	x	x	0	5	1	1	x			x			

provement, although one was apparently also oleoresin sensitive. Of those reporting improvement, five had been under treatment for a period of two years.

2. From the results obtained in this small series, it would appear that oral hyposensitization with oleoresin extracts in oil is of definite value in the treatment of plant dermatitis due to the oleoresin fraction.

3. The use of the oleoresin extract is not recommended in those cases in which the dermatitis is due to the protein fraction of the plant.

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EVALUATION OF NISENTIL AS AN ANALGESIC AGENT IN LABOUR

HARLEY J. HUGHES, M.D. and NEWELL W. PHILPOTT, M.D., *Montreal*

IN 1947 Ziering and Lee[1] synthesized a new analgesic agent known as Nisentil hydrochloride. The chemical formula is *dl*-alpha-1, 3-dimethyl-4-phenyl-4-propionoxy-piperidine hydrochloride. During the last five years others have investigated Nisentil as a narcotic agent and have found it to be highly satisfactory for use in obstetrical patients during labour.[2 to 6]

This report is concerned with the pain relieving properties of Nisentil when administered to the mother prior to delivery and its effect on fetal respiration after birth. Observations were completed in one hundred consecutive patients delivered in one service at the Royal Victoria Hospital between July and October 1953. The ages of the women ranged from 16 to 43 years, the average being 26 years. There were 37 primiparæ and 63 multiparæ. The types of patients are listed in Table I.

TABLE I.

CLASSIFICATION OF PATIENTS

Type	*No of cases*
Normal	94
Double uterus	1
Inactive tuberculosis	1
Toxic dermatitis	1
Cephalo-pelvic disproportion	3
Total	100

The method of delivery and type of anæsthetic administered are recorded in Tables II and III.

TABLE II.

METHOD OF DELIVERY

Method	*No. of cases*
Spontaneous (vertex)	53
Low forceps	36
Mid forceps	8
Breech extraction	3
Total	100

TABLE III.

ANÆSTHESIA

Type		*No. of cases*
Spinal		17
Local		10
Inhalation	Nitrous oxide, trilene, O_2	70
	Cyclopropane, O_2	3
Total		100

Our series includes the delivery of 100 viable babies. All babies were of a gestation period of 36 weeks or more with one exception, this infant being 34 weeks. There were no twin births.

An initial dose of 60 mgm. of Nisentil was given subcutaneously to the first 75 patients. This same dose was repeated when additional analgesia was required. The other 25 patients received an initial dose of 40 mgm. of Nisentil in combination with scopolamine 0.4 mgm. Only the 40 mgm. of Nisentil was administered as a repeat injection to this latter group. A total of 28 repeat injections was given to 22 patients.

EFFECT ON THE MOTHER

The average duration of labour in primiparæ was 18 hours and in multiparæ 11 hours. The duration of labour was not decreased as reported